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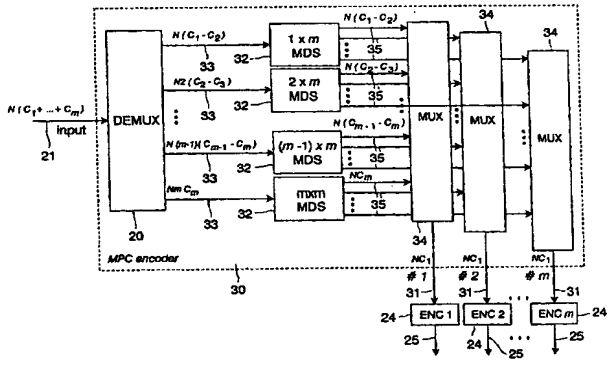
Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TRANSMISSION SYSTEM



(57) Abstract: Described is a transmission system (10) for transmitting an information signal (21) via a plurality of subchannels from a transmitter (12) to a receiver (16). The transmitter (12) first demultiplexes the information signal (21) into a plurality of information subsignals (33). Next, the information subsignals (33) are encoded according to a code with certain properties, e.g. a maximum distance separable (MDS) code, and multiplexed. Finally, the resulting subsignals (31) are channel encoded and transmitted to the receiver (16). The receiver (16) comprises a channel decoder (46,52,76,128) for successively channel decoding the received subsignals by incorporating decoding information (83,87,91) of already channel decoded information subsignals. Next, the resulting subsignals are demultiplexed, decoded according to said code and multiplexed into an output signal. Said code enables input symbols to be encoded into output symbols such that k input symbols of the k-th information subsignal are encoded with a kxm-code into m output symbols, $1 \leq k \leq m$, said code having the following properties: all k input symbols and all m-k other output symbols are determinable from any k output symbols, and no m-l other output symbols are determinable from any l output symbols l

WO 2004/030264 A1

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L1/06 H04L1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ABE T ET AL: "Space-time turbo equalization and symbol detection in frequency selective MIMO channels" VTC FALL 2001. IEEE 54TH. VEHICULAR TECHNOLOGY CONFERENCE. PROCEEDINGS. ATLANTIC CITY, NJ, OCT. 7 - 11, 2001, IEEE VEHICULAR TECHNOLGY CONFERENCE, NEW YORK, NY: IEEE, US, vol. 1 OF 4. CONF. 54, 7 October 2001 (2001-10-07), pages 1230-1234, XP010562628 ISBN: 0-7803-7005-8 the whole document ---	1-17
A	EP 0 951 091 A (LUCENT TECHNOLOGIES INC) 20 October 1999 (1999-10-20) cited in the application the whole document ---	1-17

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
22 December 2003	02/01/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	AYANOGLU E ET AL: "ANALOG DIVERSITY CODING TO PROVIDE TRANSPARENT SELF-HEALING COMMUNICATION NETWORKS" IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE INC. NEW YORK, US, vol. 42, no. 1, 1994, pages 110-118, XP000442861 ISSN: 0090-6778 the whole document	1-17

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		EP 0951091 A2	20-10-1999
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		US 2001050964 A1	13-12-2001